Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method ~~Method~~ of bonding metal shells to form a vessel having an interior void, the method comprising:

forming each of the metal shells with a peripheral flange;

aligning the metal shells with one another such that their respective peripheral flanges are engaged with one another;

assembling the aligned metal shells with tooling to engage the flanges; and

applying compression force to the flanges, via the tooling, at an elevated temperature so as to form a diffusion bond joint where the flanges meet;

wherein the region where the flanges engage one another defines a bond region, and wherein the compression force is applied broadly across the flanges so as to cover at least the bond region.

2. (Canceled)

3. (Original) The method of bonding recited in claim 1, wherein the bond joint is formed entirely over the region where the flanges engage one another.

4. (Original) The method of bonding recited in claim 1, wherein the metal shells are formed of beryllium or a beryllium alloy.

5. (Original) The method of bonding recited in claim 1, wherein the elevated temperature is in the range of about 1700°F to 1750°F.

6. (Original) The method of bonding recited in claim 1, wherein the compression force is in the range of about 2000 psi to 2500 psi.

7. (Currently amended) A metal bond joint for use with hollow articles formed from metal shells, the bond joint comprising:

a pair of opposed flanges in contact with one another, each of the opposed flanges being disposed at the periphery of one of the metal shells, the flanges being aligned with one another, ~~and~~ defining a bond region where they are in contact with one another, and being shaped such that a gap is formed in an area between the shells and at a region where the shells would abut so as to prevent the bond region from extending into the abutting shell region; and

a diffusion bond between the pair of opposed flanges, formed across the entire bond region.

8. (Canceled)

9. (Original) The metal bond joint recited in claim 7, wherein the bond joint is free of filler metal.

10. (Original) The metal bond joint recited in claim 7, wherein the metal of the bond joint is homogeneous.

11. (Original) The metal bond joint recited in claim 7, wherein the bond joint is formed of beryllium or a beryllium alloy.

12. (Original) The metal bond joint recited in claim 7, wherein the diffusion bond is formed by applying compression force to the flanges at an elevated temperature.

13. (Original) The metal bond joint recited in claim 12, wherein the elevated temperature is in the range of about 1700°F to 1750°F.

14. (Original) The metal bond joint recited in claim 12, wherein the compression force is in the range of about 2000 psi to 2500 psi.

15. (Currently amended) A hollow metal article comprising:

a pair of opposed metal shells; and

a metal bond joint, the bond joint comprising:

a pair of opposed flanges in contact with one another, each of the opposed flanges being disposed at the periphery of one of the metal shells, the flanges being aligned with one another, ~~and~~ defining a bond region where they are in contact with one another, and being shaped such that a gap is formed in an area between the shells and at a region where the shells would abut so as to prevent the bond region from extending into the abutting shell region; and

a diffusion bond between the pair of opposed flanges, formed across the entire bond region.

16. (Canceled)

17. (Original) The hollow metal article recited in claim 15, wherein the bond joint is free of filler metal.

18. (Original) The hollow metal article recited in claim 15, wherein the metal of the bond joint is homogenous.

19. (Original) The hollow metal article recited in claim 15, wherein the bond joint is formed of beryllium or a beryllium alloy.

20. (Original) The hollow metal article recited in claim 15, wherein the diffusion bond is formed by applying compression force to the flanges at an elevated temperature.

21. (Currently amended) A homogenous bond joint for use with hollow beryllium articles formed from beryllium shells, the bond joint comprising:

a pair of opposed beryllium flanges in contact with one another, each of the opposed flanges being disposed at the periphery of one of the beryllium shells, the flanges being aligned with one another and defining a bond region where they are in contact with one another; and

a diffusion bond between the pair of opposed flanges, formed across the entire bond region;

wherein the flanges are shaped such that a gap~~, preventing contact of the flanges with one another,~~ is formed in an area between the shells and at a region where the shells would abut so as to prevent the bond region from extending into the ~~area between the shells~~ abutting shell region;

wherein the diffusion bond is formed by applying compression force to the flanges at an elevated temperature.

22. (New) The method of bonding recited in claim 1, wherein the compression force is applied broadly across the flanges so as to cover only the bond region.

23. (New) The method of bonding recited in claim 1, further comprising stopping the compression when a deformation size reaches a predetermined value.

24. (New) The method of bonding recited in claim 23, wherein stopping the compression includes stopping the compression when the deformation size reaches about 0.020 to about 0.040 inches.

25. (New) The method of bonding recited in claim 1, wherein the thickness of the flanges is less than about 2 inches.

26. (New) The method of bonding recited in claim 1, further comprising placing the metal shells and the tooling into a sealed can prior to application of the compression force, wherein applying the compression force comprises pressurizing the can.

27. (New) The method of bonding recited in claim 26, wherein pressurizing the can includes pressurizing over about 1900 psi at an elevated temperature of over about 1650° F.

28. (New) The method of bonding recited in claim 1, wherein applying the compression force to the flanges includes applying the compression force to the flanges without applying the compression force to side walls of the metal shells from which the peripheral flanges extend.